

[UNDER-BALL METALLIC LAYER]

Abstract of Disclosure

An under-ball metallic layer on a contact pad with the junction between the under-ball metallic layer and the contact pad made from copper material. The under-ball metallic layer comprises an adhesion layer, a barrier layer and a wettable layer. The adhesion layer is formed over the contact pad and made from a material such as titanium-tungsten alloy or chromium. The barrier layer is formed over the adhesion layer and made from a material such as nickel-vanadium alloy. The wettable layer is formed over the barrier layer and made from a material such as copper, palladium or gold.

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